

Recommendations for Demonstrations Used in the Marketing and Sales of Novec 1230 Fluid

The safety of 3M™ Novec™ 1230 Fire Protection Fluid has been evaluated through both short term (acute) and repeat dose (chronic) product testing. In addition, there is a significant amount of human experience based on handling and use during research, development, and testing of fire protection systems. All the testing results and human experience related to Novec 1230 fluid attests to a very large margin of safety associated with this product.

Even though there is a large safety margin known, it is important that fire suppression systems OEMs and those throughout the distribution channel use appropriate care when displaying or demonstrating any industrial chemical, including Novec 1230 fluid.

Precautions

Novec 1230 fluid should be demonstrated and used responsibly. Please read and follow the precautions and other safety related information in the Material Safety Data Sheet (MSDS) and on the product label for Novec 1230 fluid. In addition, it's important to read and follow the guidance provided in the technical documentation for this product. Remember to take appropriate care when demonstrating Novec 1230 fluid in any setting, particularly a non-industrial setting. Precautions should be taken to avoid contact with eyes and to minimize evaporation to room air.

Under no circumstances should anyone ingest Novec 1230 fluid in a product demonstration. Neither body parts, nor animals, should be immersed in Novec 1230 fluid to demonstrate the safety of the material. To do so would be contrary to the principles of responsible chemical management and product stewardship, including those principles expressed in the American Chemistry Council's Responsible Care program.

Considerations for Demonstrations

In addition to good industrial hygiene and responsible use practices, there are technical guidelines that should be considered when demonstrating the unique attributes of Novec 1230 fluid. Features of the product that are often demonstrated include fast evaporation, lack of residue, high dielectric strength, and fire extinguishing performance.

Novec 1230 fluid is safe for electronics when used in accordance with applicable precautionary information and directions for its intended use. However, devices that contain moving parts that are designed to operate in air may not perform well when submersed in any liquid. One example of this is a hard disk drive. Laptop computers and some hand-held devices contain a hard disk drive that is designed to operate at high rpm in air. These devices may not mechanically perform well when covered with liquid. In addition, most hard disks are coated with a fluorochemical lubricant. This thin layer of lubricant may be removed when in contact with any liquid fluorochemical, including Novec 1230 fluid. Another example is immersing mobile phones into Novec 1230 fluid, calling the phone and/or speaking on the phone prior to complete evaporation of the fluid. While this has no impact on the electronics, it may affect the mechanical operation of the microphone or earpiece, which are designed to operate in air.

Recommended Practices

There are safe and responsible ways to demonstrate the unique properties of Novec 1230 fluid including the following:

- Pouring vapor from a container to extinguish a small candle fire. Or, a flame from a candle or long match could be lowered into the vapor space of a container of Novec 1230 fluid to demonstrate its extinguishing capability.
- Immersing books, paper currency, artwork, Post-It® Notes, etc. into the fluid to demonstrate its quick drying property without damaging paper products.
- Inserting a computer monitor, television, digital clock, etc. into a container containing Novec 1230 fluid to demonstrate its electrical non-conductivity.
- Pour Novec 1230 fluid vapor in front of a projector beam to visually demonstrate to an audience the vapor shadow projected on the screen.
- Remind audiences that Novec 1230 fluid is always stored in closed containers and is discharged as a gas from total flooding applications. Demonstrations of the product in its fluid form are for illustrational purposes only.

Practices that are NOT Recommended

- Immersing body parts or hair into the fluid.
- Immersing entire computers or any hard drive-containing device into Novec 1230 fluid.
- Pouring fluid onto a laptop keyboard. This may cause the fluid to enter the hard disk drive.

Practices that are Always Recommended

- Keep Novec 1230 fluid demonstration containers closed and covered at all times when not in use.
- Filter Novec 1230 fluid when recovering.
- Keep all water or water containing products away from Novec 1230 fluid. Not doing so may contaminate the fluid and render it conductive.
- Keep all solvents (e.g., acetone, alcohols, etc.) away from Novec 1230 fluid. These solvents may cause dissolution of materials of construction and contaminate the fluid.
- Ship samples in advance of travel to avoid possible airport delays. Be sure to include an MSDS (Materials Safety Data Sheet) in the shipping package.
- If you must personally transport the fluid, check the sample with luggage and have the sample properly labeled and accompanied by an MSDS.

In Summary

When using Novec 1230 fluid in presentation demonstrations, always maintain the respect necessary for the continued safe use and handling of this product. Always read and follow the precautions and directions for use in the MSDS and product label for the Novec 1230 fluid.

The 3M™ Novec™ Brand Family

The Novec brand is the hallmark for a variety of patented 3M products. Although each has its own unique formula and performance properties, all Novec products are designed in common to address the need for safe, effective, sustainable solutions in industry-specific applications. These include precision and electronics cleaning, heat transfer, fire protection, lubricant deposition and several specialty chemical applications.

3M™ Novec™ Engineered Fluids • 3M™ Novec™ Aerosol Cleaners • 3M™ Novec™ 1230 Fire Protection Fluid • 3M™ Novec™ Electronic Coatings • 3M™ Novec™ Electronic Surfactants

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Issued: 8/09 © 3M 2009.
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60-5002-0070-8

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